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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
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09/595,325 06/16/00 ZENG

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EXAMINER

GANEY, S

ART UNIT

PAPER NUMBER

3752

DATE MAILED:

05/31/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/595,325

Applicant(s)

ZENG, JIYUE

Examiner

Steven J. Ganey

Art Unit

3752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 3 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim, or amend the claim to place the claim in proper dependent form, or rewrite the claim in independent form. In claim 3, lines 1 and 2, a "generally cylindrical side wall" is recited, however, the limitation has already been positively recited in claim 1, lines 7 and 8.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1, 9 and 10, there is an inconsistency between the language in the preamble of claim 1, which recites an orifice assembly for use with a high pressure fluid jet cutting nozzle, and body of claims 9 and 10 which also positively recite a mixing tube, which is part of the fluid jet cutting nozzle. This makes the scope of the claims unclear since they appear to be reciting the subcombination of the orifice assembly, however, the limitation concerning the combination with the mixing tube, is also positively recited. Applicant is required to clarify whether the claims are drawn to the subcombination or the combination and to amend the claims to be

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consistent with the intent. As to treating the claims on the merits, the examiner is considering the claims to be drawn to the combination of the orifice assembly and the fluid jet cutting nozzle.

In claim 3, the sentence "a generally rectilinear bottom wall" raises double inclusion issues since "a bottom wall generally normal to the axis of the central bore" has been positively recited in claim 1 and appears to be claiming the same bottom wall.

In claims 11 and 15, there is an inconsistency between the language in the preamble of claim 11, which recites an orifice assembly for use with a high pressure fluid jet cutting nozzle, and body of claim 15 which also positively recites a mixing tube and a nozzle body, which are part of the fluid jet cutting nozzle. This makes the scope of the claims unclear since they appear to be reciting the subcombination of the orifice assembly, however, the limitation concerning the combination with the mixing tube and the nozzle, is also positively recited. Applicant is required to clarify whether the claims are drawn to the subcombination or the combination and to amend the claims to be consistent with the intent. As to treating the claims on the merits, the examiner is considering the claims to be drawn to the combination of the orifice assembly and the fluid jet cutting nozzle.

In claim 15, line 4, the phrase "the nozzle body" is indefinite since it is not clear how the nozzle body can surround the orifice assembly and also surround itself. It appears that "the nozzle body" should be --the mixing tube--.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Hashish et al '085.

Hashish et al '085 shows an orifice assembly for use with a fluid jet cutting nozzle comprising an orifice body 24a; a nozzle body 92; a first/central bore 40a/42a; a mixing cavity 30a; a second/inlet bore 58a; a jewel 32a in a recess; mixing tube 28a; a high pressure cavity 108 with cylindrical side wall, a bottom wall normal to the axis of the central bore and a generally quarter circle curvilinear transition portion, see Figure 7; and a soft seal 112.

3. Claims 11-13, 16 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Chalmers.

Chalmers shows an orifice assembly for use with a fluid jet cutting nozzle comprising an orifice body 37; a first bore 67; a mixing cavity 78; a second bore 79; a jewel 63; and a soft seal 53.

4. Claims 11-13 and 15-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Hashish et al '289.

Hashish et al '289 shows an orifice assembly for use with a fluid jet cutting nozzle comprising an orifice body 2/13; a nozzle body 24; a first bore 8; a mixing cavity, see Figure 1; a second bore 17; a jewel 1 in recess 6; mixing tube 16; and a soft seal 23.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Franz, Miida and Johnson, Jr. et al show high pressure cutting nozzles with high


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pressure cavities having cylindrical side walls, a bottom wall normal to the axis of the central bore and a generally quarter circle curvilinear transition portion.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven J. Ganey whose telephone number is (703) 308-2585. The examiner can normally be reached on Monday, Tuesday, Thursday and Friday from 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Scherbel, can be reached on (703) 308-1272. The fax phone number for this Group is (703) 308-7766.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-1113.


STEVEN J. GANEY
PATENT EXAMINER
5/25/01

sjg

5/25/01